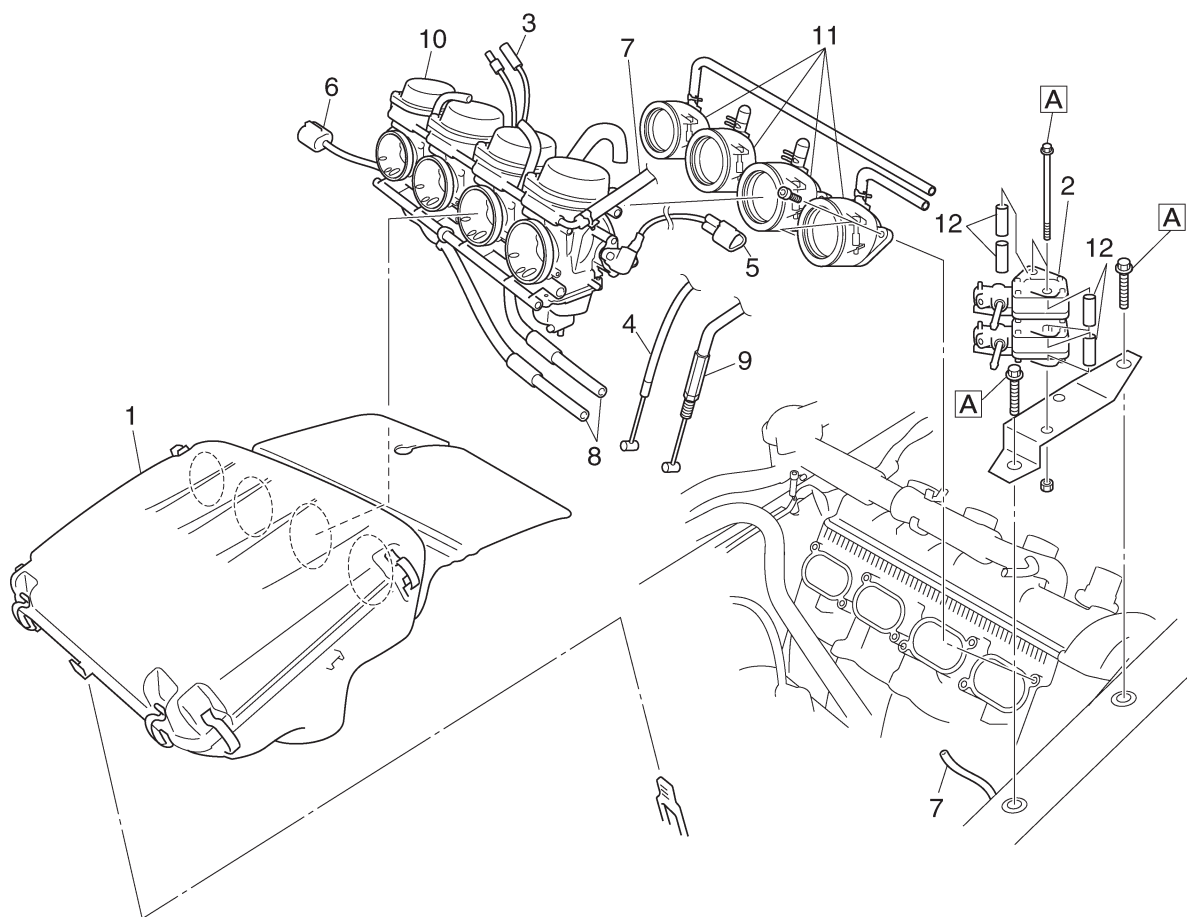




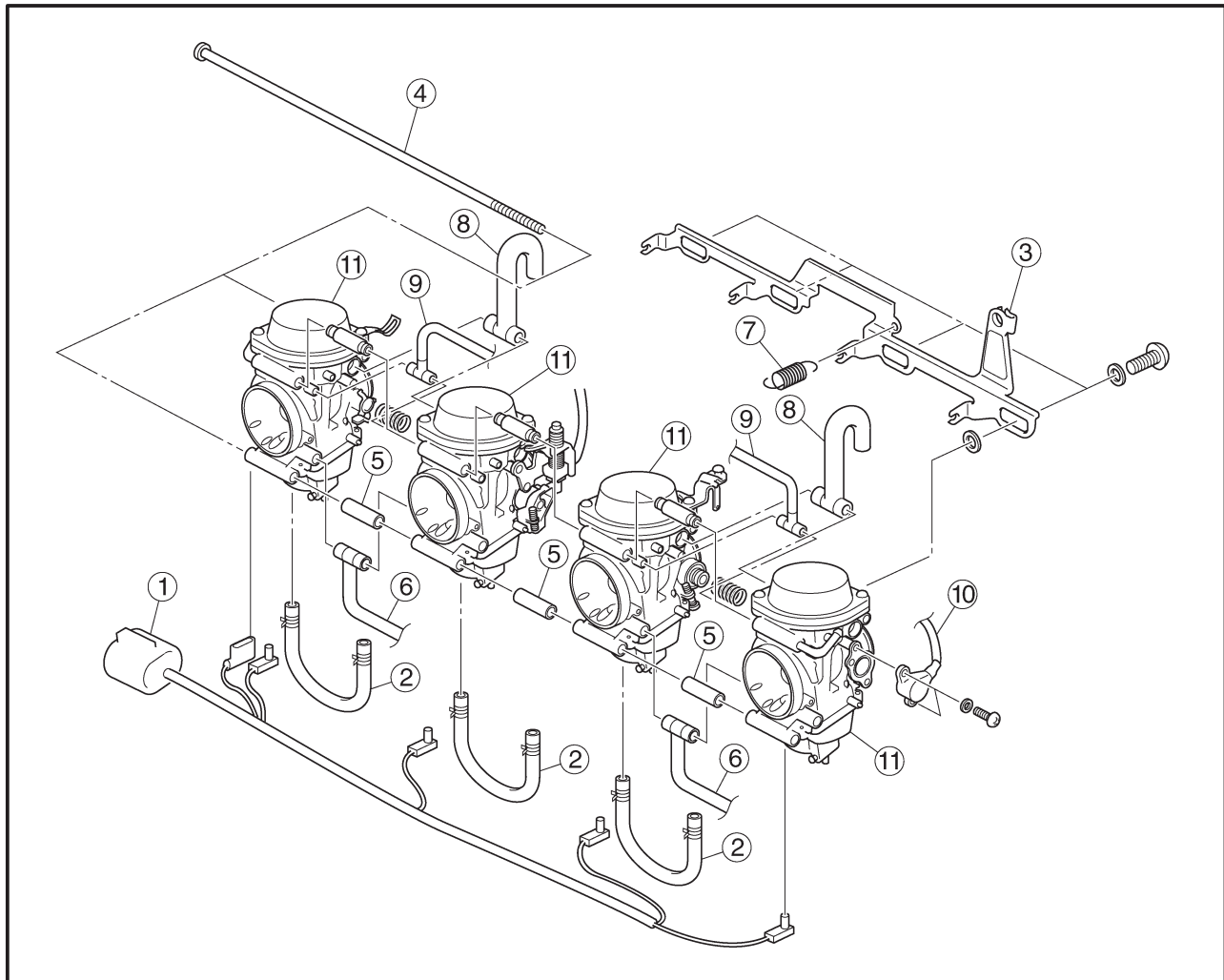
CARBURETION

CARBURETORS

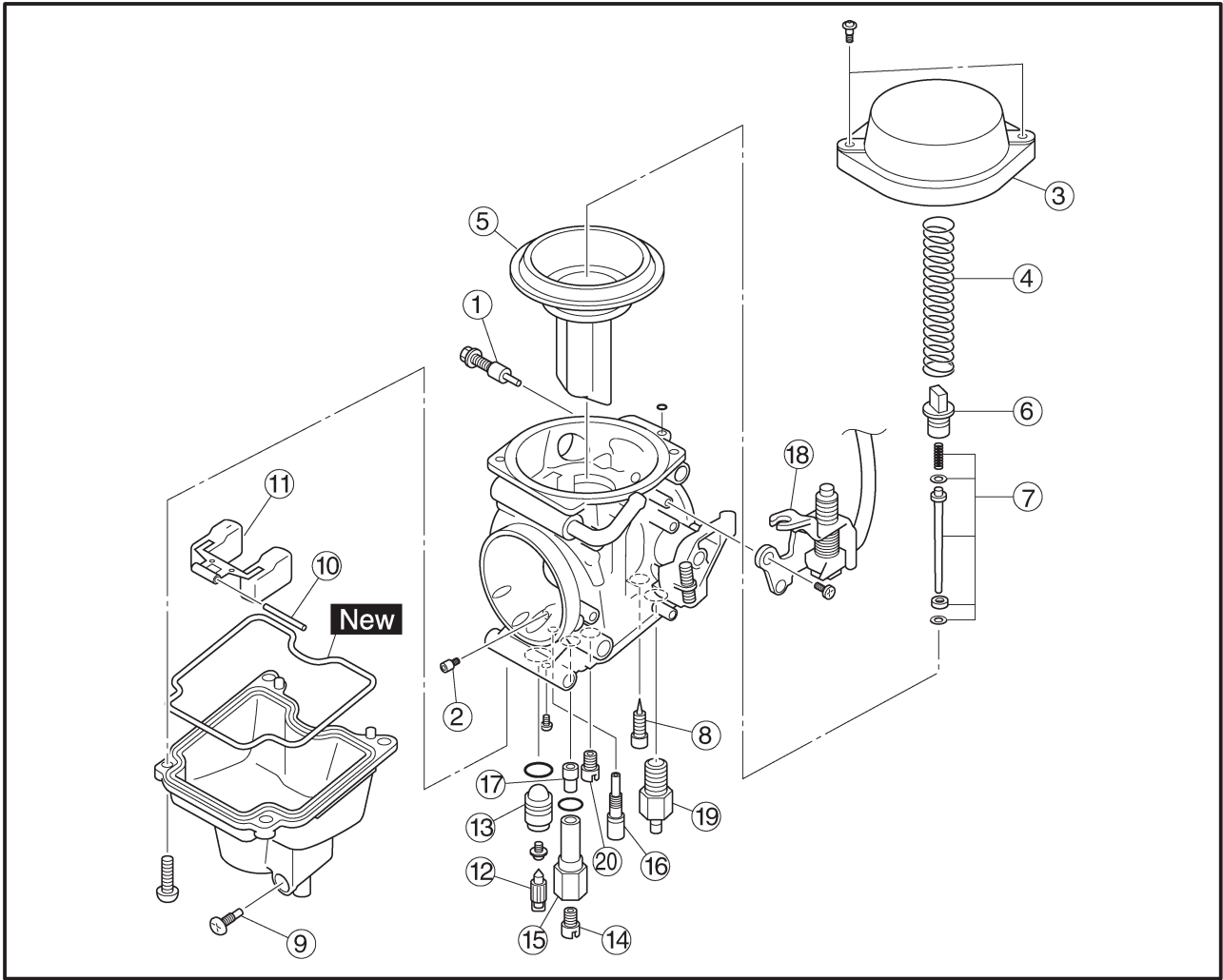
A : 10 Nm (1.0 m•kg, 7.2 ft•lb)



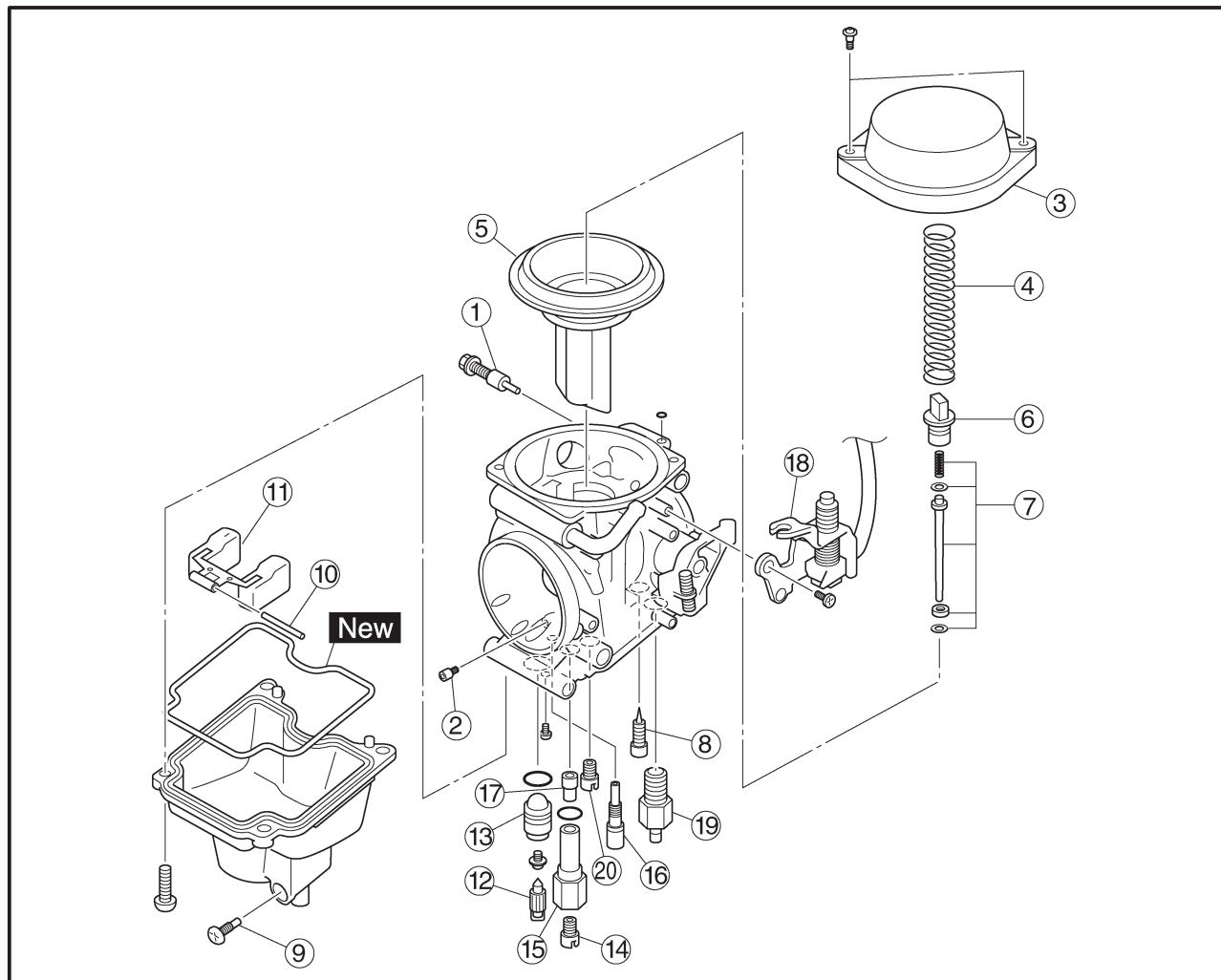
Order	Job name/Part name	Q'ty	Remarks
	Carburetors removal		Remove the parts in the order listed below.
1	Intake silencer	1	
2	Fuel pump	1	
3	Carburetor switch (T.O.R.S.) lead	2	Disconnect.
4	Starter cable	1	
5	Throttle position sensor coupler	1	Disconnect.
6	Carburetor heater lead	1	Disconnect.
7	Carburetor heating hose	2	
8	Fuel hose	2	
9	Throttle cable	1	
10	Carburetor assembly	1	
11	Caburetor joint	4	
12	Collar	4	
			For installation, reverse the removal procedure.



Order	Job name/Part name	Q'ty	Remarks
	Carburetor separation		Remove the parts in the order listed below.
①	Carburetor heater harness	1	
②	Carburetor heating hose	3	
③	Starter plunger link	1	
④	Connecting bolt	2	
⑤	Spacer	3	
⑥	Fuel inlet pipe	2	
⑦	Spring	1	
⑧	Vacuum chamber air vent hose	2	
⑨	Float chamber air vent hose	2	
⑩	Throttle position sensor	1	
⑪	Carburetor	4	For installation, reverse the removal procedure.



Order	Job name/Part name	Q'ty	Remarks
	Carburetor disassembly		Disassemble the parts in the order listed below. NOTE: _____ The following procedure applies to all of the carburetors. _____
①	Starter plunger	1	
②	Pilot air jet	1	
③	Vacuum chamber cover	1	
④	Piston valve spring	1	
⑤	Piston valve	1	
⑥	Jet needle holder	1	
⑦	Jet needle kit	1	
⑧	Pilot screw	1	
⑨	Fuel drain bolt	1	
⑩	Float pin	1	



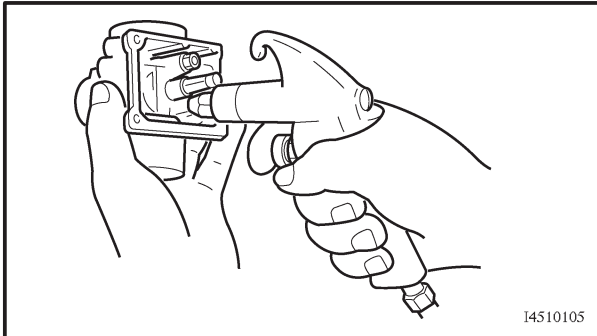
Order	Job name/Part name	Q'ty	Remarks
⑪	Float	1	For assembly, reverse the disassembly procedure.
⑫	Needle valve	1	
⑬	Needle valve seat	1	
⑭	Main jet	1	
⑮	Main jet holder	1	
⑯	Pilot jet	1	
⑰	Needle jet	1	
⑱	Carburetor switch (T.O.R.S.)	1	
⑲	Carburetor heater	1	
⑳	Starter jet	1	



INSPECTION

1. Inspect:

- Carburetor body
 - Float chamber
 - Jet housing
- Cracks/damage → Replace.

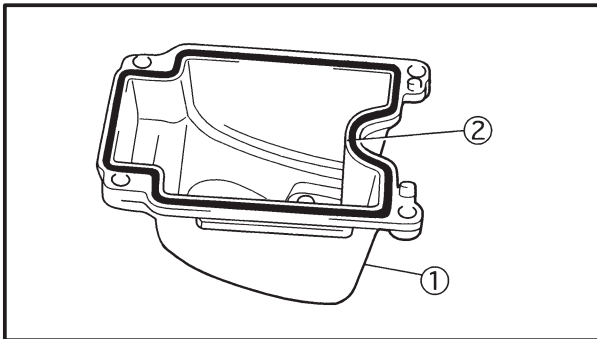


2. Inspect:

- Fuel passages
- Obstruction → Clean.

NOTE:

- Use a petroleum based solvent for cleaning.
- Blow out all passage and jets with compressed air.

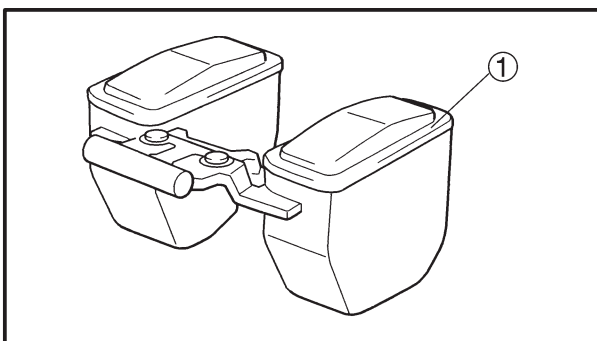


3. Inspect:

- Float chamber body ①

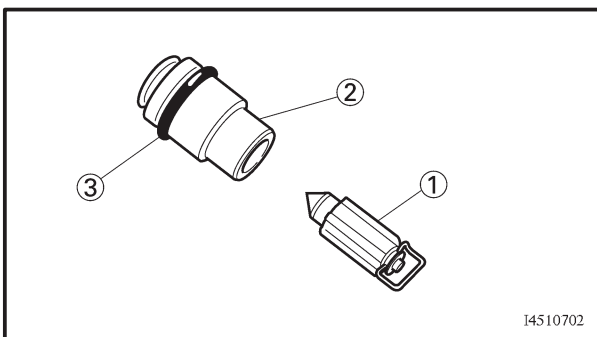
4. Inspect:

- Float chamber rubber gasket ②
- Cracks/damage/wear → Replace.



5. Inspect:

- Float ①
- Damage → Replace.

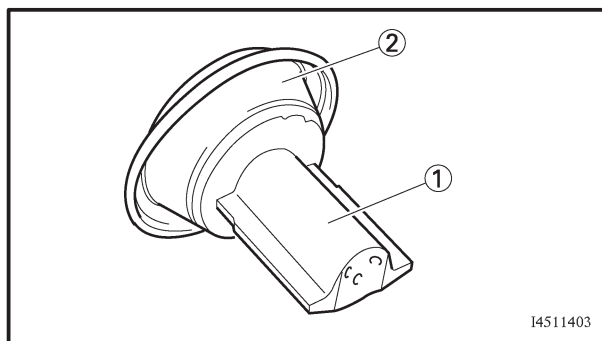


6. Inspect:

- Needle valve ①
 - Needle valve seat ②
- Damage/obstruction/wear → Replace the needle valve, needle valve seat and O-ring as a set.

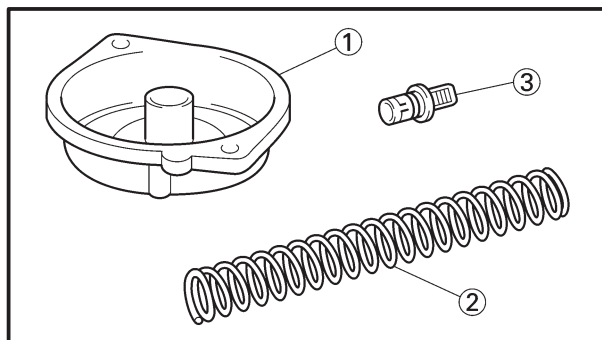
7. Inspect:

- O-ring ③
- Damage/wear → Replace the needle valve, needle valve seat and O-ring as a set.



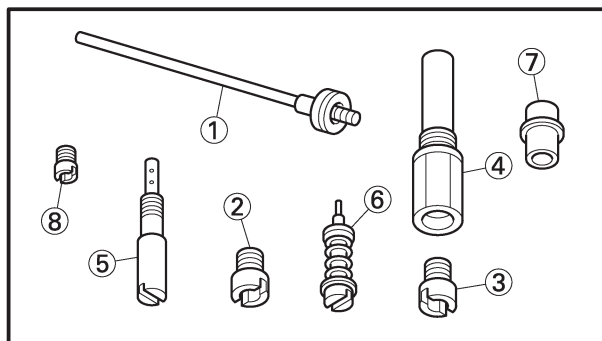
8. Inspect:

- Piston valve ①
Damage/scratches/wear → Replace.
- Rubber diaphragm ②
Cracks/tears → Replace.



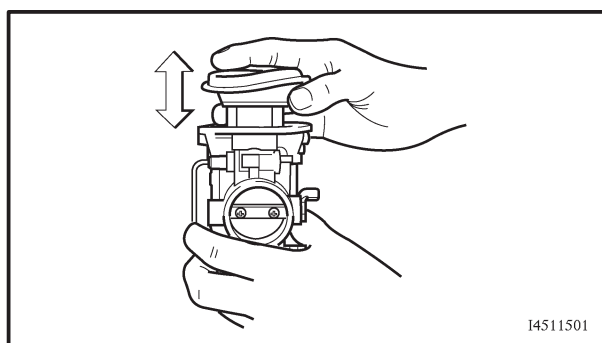
9. Inspect:

- Vacuum chamber cover ①
- Piston valve spring ②
- Jet needle holder ③
Cracks/damage → Replace.



10. Inspect:

- Jet needle kit ①
- Starter jet ②
- Main jet ③
- Main jet holder ④
- Pilot jet ⑤
- Pilot screw ⑥
- Needle jet ⑦
- Pilot air jet ⑧
Bends/damage/wear → Replace.
Obstruction → Clean.
Blow out the jets with compressed air.



11. Inspect:

- Piston valve movement
Insert the piston valve into the carburetor body and move it up and down.
Tightness → Replace the piston valve.

12. Inspect:

- Fuel feed pipes
- Hose joint
Cracks/damage → Replace.
Obstruction → Clean.
Blow out the pipes with compressed air.

13. Inspect:

- Fuel feed hoses
- Fuel hoses
Cracks/damage/wear → Replace.
Obstruction → Clean.
Blow out the hoses with compressed air.



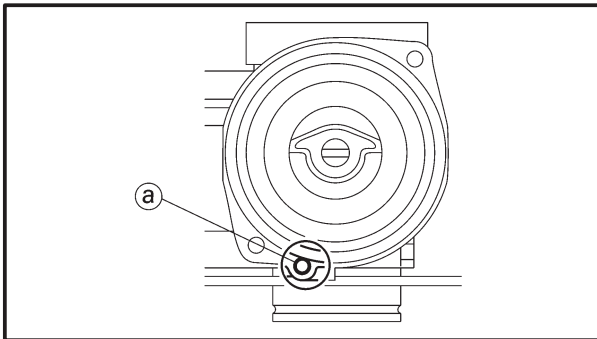
ASSEMBLY

NOTE:

- Before assembling the carburetors, wash all of the parts in a petroleum based solvent.
- Always use a new gasket and O-rings.

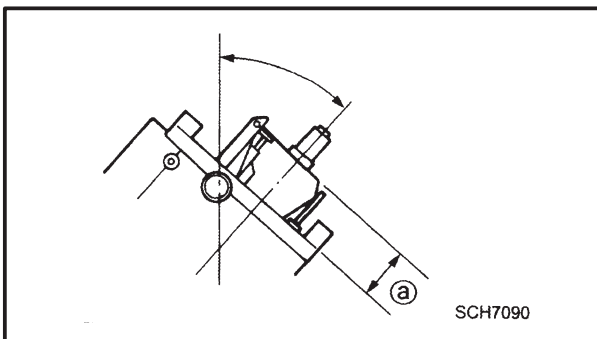
1. Install:

- Jet needle kit
- Needle jet
- Pilot jet
- Main jet



2. Inspect:

- Piston valve
- Piston valve spring
- Vacuum chamber cover
- O-ring (a)



3. Measure:

- Float height (a)
- Out of specification → Adjust.



Float height:

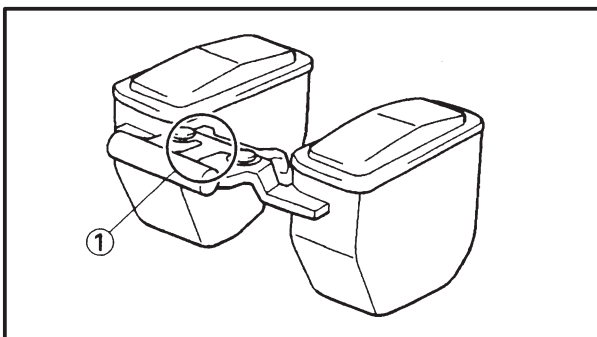
11 ~ 15 mm (0.43 ~ 0.59 in)

Measurement and adjustment steps:

- Hold the carburetor upside down.
- Measure the distance between the carburetor body and top of the floats.

NOTE:

The float arm should be resting on the needle valve without exerting pressure on it.



- If the float height is not within specification, inspect the valve seat and needle valve.
- If either is worn, replace them both.
- If both are fine, adjust the float height by bending the float arm tang (1) on the float.
- Recheck the float height.



INSTALLATION

NOTE:

After installing all parts, refer to “CABLE ROUTING” in CHAPTER 9, to check the cable, lead and hose routing.

1. Adjust:

- Carburetor synchronization

Refer to “SYNCHRONIZING THE CARBURETORS” in CHAPTER 2.

2. Adjust:

- Engine idling speed

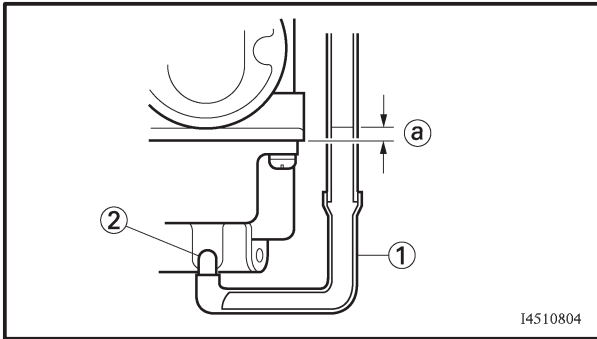
**Engine idle speed:****1,350 ± 100 r/min****(1,250 ~ 1,450 r/min)**

Refer to “ENGINE IDLE SPEED ADJUSTMENT” in CHAPTER 2.

3. Adjust:

- Throttle cable free play

Refer to “THROTTLE CABLE FREE PLAY” in CHAPTER 2.



FUEL LEVEL ADJUSTMENT

1. Measure:

- Fuel level ①

Out of specification → Adjust.



Fuel level (below the line on the float chamber):

3.0 ~ 4.0 mm (0.118 ~ 0.157 in)

Measurement steps:

- Install the fuel level gauge ① to the fuel drain pipe ②.



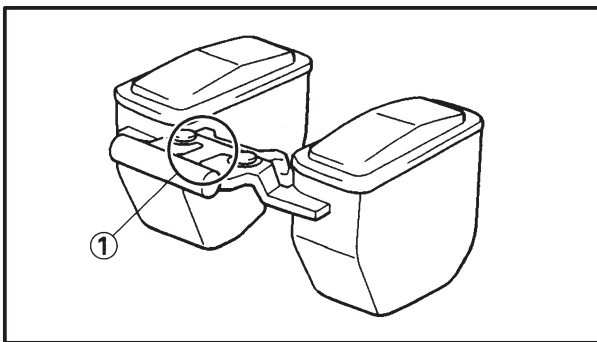
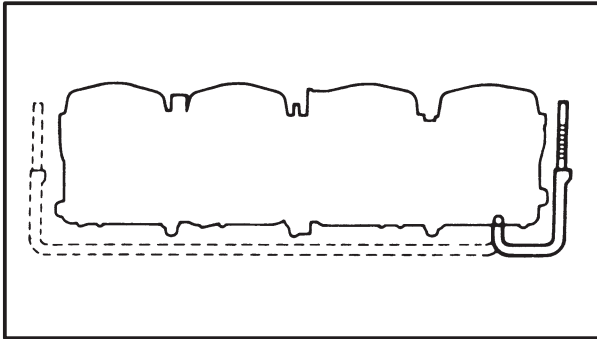
Fuel level gauge

90890-01312, YU-01312-A

- Loosen the fuel drain screw.
- Hold the fuel level gauge vertically next to the line on the float chamber.
- Measure the fuel level ① on both sides of the carburetor assembly.

NOTE:

The fuel level readings should be equal on both sides.



2. Adjust:

- Fuel level

Adjustment steps:

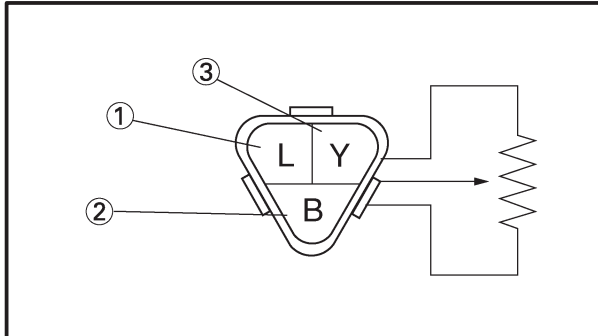
- Remove the carburetor assembly.
- Inspect the needle valve seat and needle valve.
- If either is worn, replace them as a set.
- If both are fine, adjust the float height by bending the float tang ① or the float.
- Recheck the fuel level.



THROTTLE POSITION SENSOR (T.P.S.) INSPECTION AND ADJUSTMENT

NOTE:

Before adjusting the throttle position sensor, properly adjust the idle speed.



1. Inspect:

- Throttle position sensor.

Inspection steps:

- Disconnect throttle position sensor coupler.
- Connect the pocket tester ($\Omega \times 1k$) to the throttle position sensor coupler.

Tester (–) lead → Blue terminal ①

Tester (+) lead → Black terminal ②

- Check the throttle position sensor resistance.



**Throttle position sensor
resistance “R₁”:**

**4 ~ 6 k Ω at 20°C (68°F)
(Blue – Black)**

Out of specification → Replace the throttle position sensor.

- Connect the pocket tester ($\Omega \times 1k$) to the throttle position sensor coupler.

Tester (–) lead → Yellow ③

Tester (+) lead → Black ②

- While slowly pushing the throttle check the throttle position sensor resistance.



**Throttle position sensor
resistance “R₂”:**

**0 ~ 4 k Ω at 20°C (68°F)
(Yellow – Black)**

Out of specification → Replace the throttle position sensor.

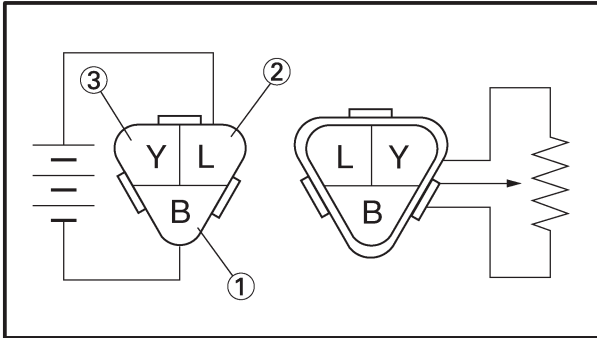


2. Adjust:

- Throttle position sensor position

Adjustment steps:

- Disconnect the throttle position sensor coupler.
- Connect the test coupler to the throttle position sensor.
- Connect three dry cells (1.5 V × 3 pcs.) in series to the test coupler.



Dry cells (–) → ①

Dry cells (+) → ②

- Connect the digital multimeter to the test coupler.

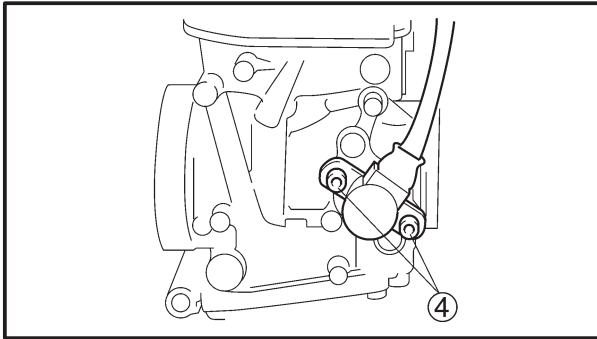
Digital multimeter (–) lead → ①

Digital multimeter (+) lead → ③

- Measure the voltage ①.

NOTE:

When measuring the voltage ① be sure that the test coupler is connected to the throttle position sensor.



- Calculate the specified voltage ②.

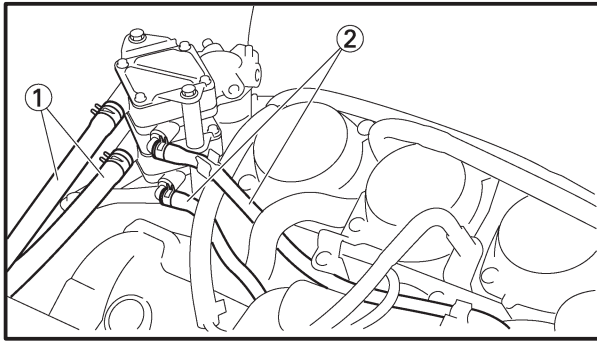
Specified voltage ② = Voltage ① × (0.136)

- Loosen the throttle position sensor bolts ④.
- Connect the digital multimeter to the test coupler

Digital multimeter (–) lead → ①

Digital multimeter (+) lead → ③

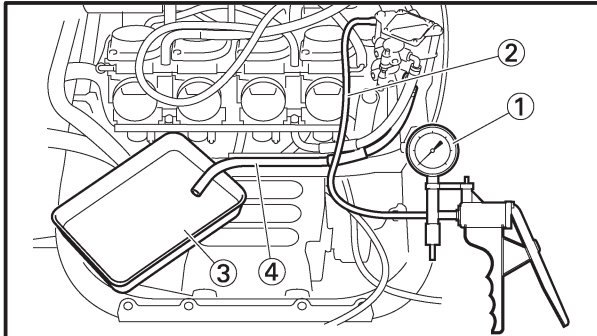
- Adjust the throttle position sensor position to obtain the specified voltage ②.
- Tighten the throttle position sensor bolts ④.
- Disconnect the test coupler and connect the throttle position sensor coupler.



INSPECTION

1. Inspect:

- Fuel hose ①
 - Vacuum hose ②
- Clogs/damage → Replace.



2. Inspect:

- Fuel pump operation.

Inspection steps:

- Connect the Mity vac ① to the vacuum hose ②.



Mity vac:

90890-06756, YB-35956

- Place a container ③ under the end of the fuel hoses ④.
- Operate the Mity vac ① while checking that fuel flows from the fuel hoses ④.
- If fuel does not flow out, replace the fuel pump.

INSTALLATION

NOTE:

After installing all parts, refer to “CABLE ROUTING” in CHAPTER 9, to check the cable, lead and hose routings.